

Final Report

Leaking Underground Storage Tank Kaizen Event

July 12-16, 2004

Glossary:

AA – Administrative Assistant

AO – Administrative Order

AST – Aboveground Storage Tank

ATP – Ability to Pay

CADR – Corrective Action Design Report

FP – Free Product

GWP – Certified Groundwater Professional

ILO – Innocent Land Owner

LUST – Leaking Underground Storage Tank

NFA – No Further Action

o/o – Owner/Operator

OD – Overdue

P – Priority

PEI – Preston Engineering Inc.

PFP – Pay for Performance

PLR – Preliminary LUST Report

PM – Project Manager

PMCI – Petroleum Marketers and Convenience Stores of Iowa

PMMIC – Petroleum Marketers Mutual Insurance Company

RP – Responsible Party

SMR – Site Monitoring Report

T1 – Tier 1 Report

T2 SCR – Tier 2 Site Cleanup Report

T3WP – Tier 3 Work Plan

UST – Underground Storage Tank

Introduction:

“Kaizen” is a combination of two Japanese symbols that mean “change” and “good”. A Kaizen event creates fast, data-driven, fact-based, practical solutions for a challenging process by utilizing cross-functional teams of empowered individuals. This results in immediate, beneficial changes to a process by removing wasteful inefficiencies such as workflow, paper processing, and process steps.

Moreover, Kaizen events do not focus on people; they focus on a process and how that process can be improved. People are an appreciating asset and it is an inefficient process that holds them back.

Furthermore, Kaizen events are not about compromising environmental regulations; they are about streamlining a process by removing wasteful inefficiencies. In fact, by improving the process we can focus more of our time and resources to environmental protection activities.

In this Kaizen event, a cross-functional team of DNR staff, Groundwater Professionals (GWP), owner/operators (o/o) and funding sources (PMMIC and the UST Fund) came together to address streamlining corrective action decisions. The following sections of this report highlight what was accomplished during the week and what work remains to be done.

Goals:

The goals achieved during this Kaizen event, or that will be achieved as a result of the event, are bulleted below.

- Reduce the time it takes for a corrective action decision to 90 days and implementation to 180 days from Tier 2 SCR approval.
- Achieve a 90% first time acceptance rate of CADR submittals.
- CADR review times shall be within 60 days.
- Improve compliance with the required time for submittals.
- To have 100 high-risk sites with approved corrective action plans through the new process in the next year.
- Reallocate the resources dedicated to cleanup by 50% by 2009.

Objectives:

The objectives achieved during this Kaizen event, or that will be achieved as a result of the event, are bulleted below.

- DNR will anticipate the sunset of the UST Fund in 2016 and ensure the risks to public health are minimized at UST Fund eligible sites prior to the loss of funding.
- The improved CADR system will be a reliable, understandable process that stakeholders believe in.
- Ensure that all of these objectives occur without harming or compromising the environment.

Team Members:

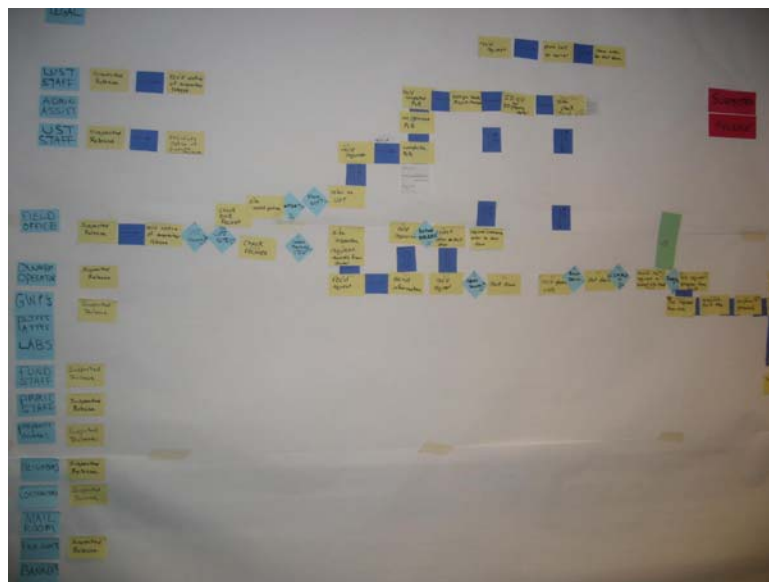
A special thanks goes out to the following persons who made this week a success. The DNR recognizes that taking a full week out of their schedules was a difficult commitment, but the dividends of their effort have greatly improved the process.

- Jeff Myrom (Team leader, DNR)
- Elaine Douskey (Sub-team leader, DNR)
- Jim Scott (Consultant, TBM)
- Julie Chang (Event recorder, DNR)
- Tim Hall (DNR)
- Jim Humeston(DNR)
- Rochelle Cardinale (DNR)
- Tammy Vander Bloemen (DNR)
- Dave Wornson (DNR)
- Bill Gross (DNR)
- Glenn Norgart (Casey's)
- Jeff Hove (Petroleum marketers)
- Tom Norris (PMMIC)
- James Gastineau (Fund)
- Ken McFadden (Preston Engineering)
- Tom Draur (Barker Lemar)
- Ray Widder (Seneca)
- Neil Searcy (GAB Robins)

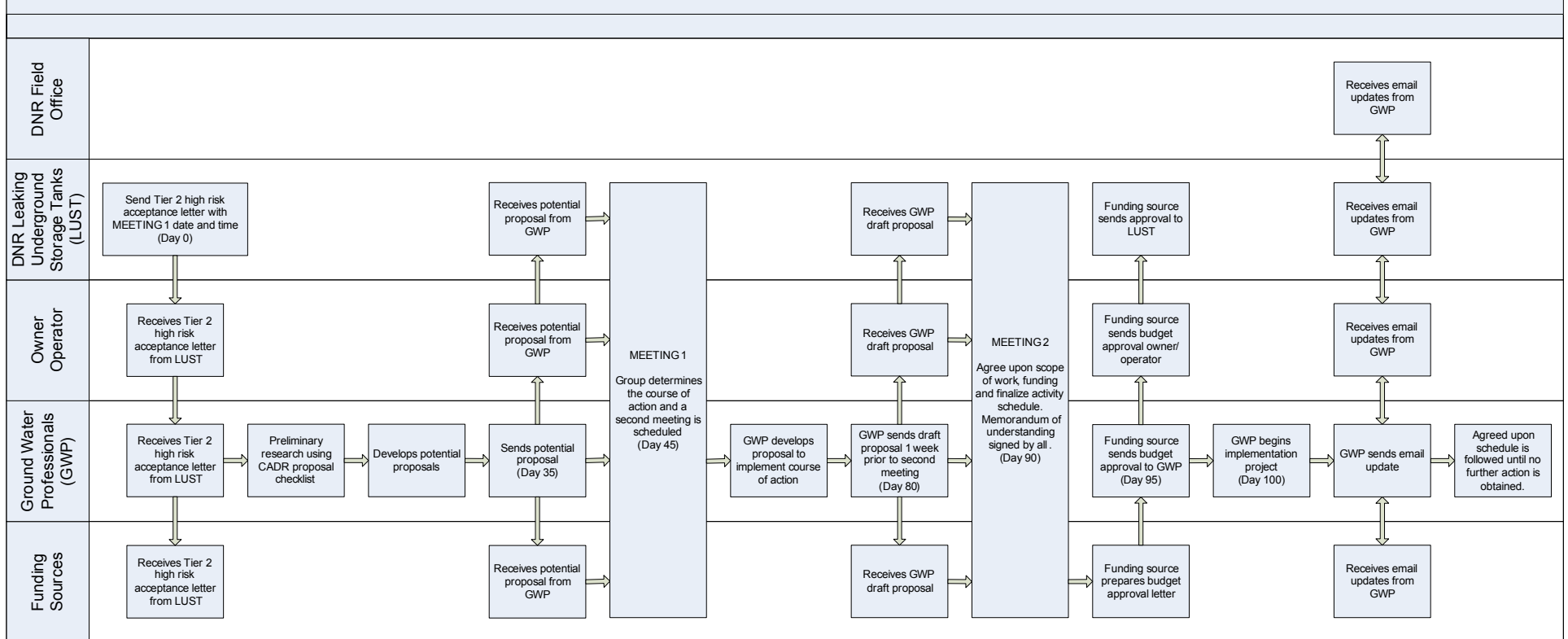
Pictures of the Process:

The photos below show portions of the process. By creating a flowchart of the process, team members were able to visualize how a site moves from identification of a release to corrective action. Moreover, it allows for measurable data to compare the old process to the new and improved state.

This was the longest flowchart the DNR has created to date in a Kaizen event. It stretched out over more than two conference room walls. In fact, it was so long that it rapidly became apparent that more than one Kaizen event would be needed to address the entire LUST process. For this Kaizen event, the team decided to focus on the corrective action phase of the process.



New Corrective Action Process



Results:

The new CADR process is illustrated on the previous page. This process is a great improvement from the previous state. The expected timeline for the new CADR process is as follows.

- Day 0 – T2 high-risk letter is sent out by the DNR.
- Day 35 – GWP sends potential proposal drafts to all parties.
- Day 45 – First teleconference/meeting is held. Corrective action is selected.
- Day 80 – GWP mails specific proposal (e.g. plan and budget) of the selected corrective action to all parties.
- Day 90 – Second teleconference/meeting is held to discuss specifics. Schedule is set for actions to be completed and all parties sign legal agreement.
- Day 95 – Funding source sends budget approval.
- Day 100 – GWP begins implementation of corrective action project.

The table below further illustrates the results achieved during this Kaizen event.

Step – a task or activity where work is performed.

Loop – a series of steps that loop backwards and repeat themselves at least once.

Delays – a point where time is wasted by waiting for something to occur.

Decisions – a point where information is checked and a decision made regarding what to do next.

Handoffs – occurs when work is passed from one entity to another, such as between the DNR and a GWP.

Black holes – extreme combinations of loops, delays, decision, and handoffs in the process from which no further progress is made or where years can pass before proceeding on with the process.

	Old CADR Process	New CADR Process	% Change for CADR
Total steps	43	26	40%
Number of loops	5	0	100%
Number of delays	9	0	100%
Number of decisions	10	2	80%
Number of handoffs	13	5	62%
Number of black holes	1	0	100%

30 Day List:

Near the conclusion of the Kaizen event, a list was created of all the activities that need to take place in the next 30 days to implement these changes. Those activities are bulleted below.

- Concentrate on 1st 23 CADRs through the new system.
- Select a facilitator.
- Refocus project managers temporarily.
- Funding sources for the facilitator.
- Communication game plan – Web, PMCI, EPI, and PMMIC.
- Query the sites per recommendations of team.
- Free product survey – FO and GWP.
- Explore town meetings, scheduling for PMCI road show and rules meetings.
- Make clear to o/o's that they can initiate this process by contacting DNR. Communicate the benefits of initiating the process. Sell it!
- Preparation of legal agreement.
- Finalize the pre-meeting form by 7/23.
- Add a feel good sentence to letter to o/o's at start of process.
- Develop system for tracking the progress of the new process.
- Phone system and space for facilitator to conduct conference calls.

Conclusion:

The LUST Kaizen event was a success in that the team created a new system capable of rapidly addressing the CADRs and getting the site to cleanup. Lessons learned from this event can likely be applied to other areas of the LUST process and as many as three more Kaizen events could be held regarding portions of this process. In the near future, however, the challenge is to implement the new process. Creating a change is difficult, but sustaining a change also takes effort. Nonetheless, these changes will result in overall improvements to the process for the good of all stakeholders. We thank all the team members for coming together to meet this challenge.